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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,919	10/18/2001	Michael J. Scaggs	1443.05	2164

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CLEARWATER, FL 33760

EXAMINER

MENEFEER, JAMES A

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,919

Applicant(s)

SCAGGS, MICHAEL J.

Examiner

James A. Menefee

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. Note that some of the references listed in the specification have been cited by the examiner. See the attached form PTO-892.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "10". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application, or the reference sign must be deleted from the specification. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Das et al. (US 5,835,520) in view of Lister et al. (WO 97/08792).

Regarding claim 1, Das discloses an excimer laser comprising a discharge chamber filled with a gas mixture at least including a halogen containing molecular species and a buffer gas, a discharge circuit, a plurality of electrodes for energizing the gas mixture, and a resonant cavity including the discharge chamber for generating a laser beam. There is not disclosed the intra-cavity homogenizer as claimed.

Lister teaches an optical system where first and second bi-prisms 12,13 are disposed at opposite ends of a cavity and have an amplifier 14 therebetween. It would have been obvious to one skilled in the art to utilize the bi-prisms in Das's system, thus making the discharge chamber the optical amplifier that is between the bi-prisms, as the use of this system will avoid the unreliability and alignment problems associated with other systems, as taught by Lister. When the bi-prisms are placed in Das's system, they will be located such that optical axes of the bi-prisms are substantially parallel to the laser beam axis.

Regarding claims 2-4, the bi-prisms of Lister are shaped as claimed. It is not disclosed that one or both of the bi-prisms may have a reflective coating formed thereon. It is well known that reflective coatings may be formed on optical elements of a laser system, as this allows the removal of separate reflectors. It would have been obvious to one skilled in the art to form a reflective coating on the bi-prisms so that the reflectors 10,11 of Lister's system, and thus the reflectors of Das's system, may be removed, thus allowing for the use of less parts in the system, as is well known.

Art Unit: 2828

Regarding claims 5-7, the limitations are taught as in the rejection of claims 1-4 above except there is only required one bi-prism located at an end of the cavity.

Regarding claims 8-11, the limitations are taught as in the rejection of claims 1-4 except there is only required one bi-prism.

Regarding claim 12, the bi-prisms of Lister may be located between the amplifier section and the resonator reflector.

Regarding claim 13, there is included a line narrowing module in Das's system.

Regarding claim 14, it is not disclosed that there is a gas-handling module for replenishing the gas. It is well known that such gas-handling modules are often included in excimer lasers. It would have been obvious to one skilled in the art to include such a gas-handling module so that fresh gas will be present, which improves the performance of the excimer laser, as is well known.

Regarding claims 15-19, the limitations are taught as in the rejection of claims 1-4 above except the bi-prisms are not required to be at opposing ends of the cavity.

Regarding claims 20-23, the limitations are taught as above except it is not disclosed that one of the resonator reflectors is highly reflective (as in claim 20) or that one of the resonator reflectors is partially reflective (as in claim 22). It is well known that in a laser resonator it is often the case that one resonator reflector is highly reflecting and one is partially reflecting. It would have been obvious to one skilled in the art to make one reflector highly reflecting so that loss is reduced because all of the light will be reflected back and oscillated through the system, as is well known. It would have been obvious to one skilled in the art to make one of the

Art Unit: 2828

reflectors partially reflecting so that a portion of the light may be output from the system in the form of the output beam, as is well known.

Claims 24-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Das in view of Lister, and further in view of Trolinger.

Regarding claims 24-35, the limitations are taught as in the above rejections, except it is not disclosed that a roof prism may be used as one of the resonator reflectors. Trolinger teaches the use of a roof prism in a laser as the resonator reflector. It would have been obvious to one skilled in the art to use a roof prism as a resonator reflector because it provides for a longer length optical cavity in a more compact space, as taught by Trolinger.

Regarding claims 27 and 32, it is further not disclosed that the bi-prism and roof prism may be integrated as one component. It has been held that making two parts integral by the use of one-piece construction is merely a matter of engineering design choice. *In re Larson*, 340 F.2d 965, 144 USPQ 347 (CCPA 1965); *In re Lockhart*, 190 F.2d 20, 90 USPQ 214 (CCPA 1951).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references were listed in the specification and are pertinent for their disclosures of bi-prisms in laser systems. However, each of the references show extra-cavity bi-prisms, as opposed to the intra-cavity bi-prisms required in the present invention.

Art Unit: 2828

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (703) 605-4367.

The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



JM
November 5, 2003



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